

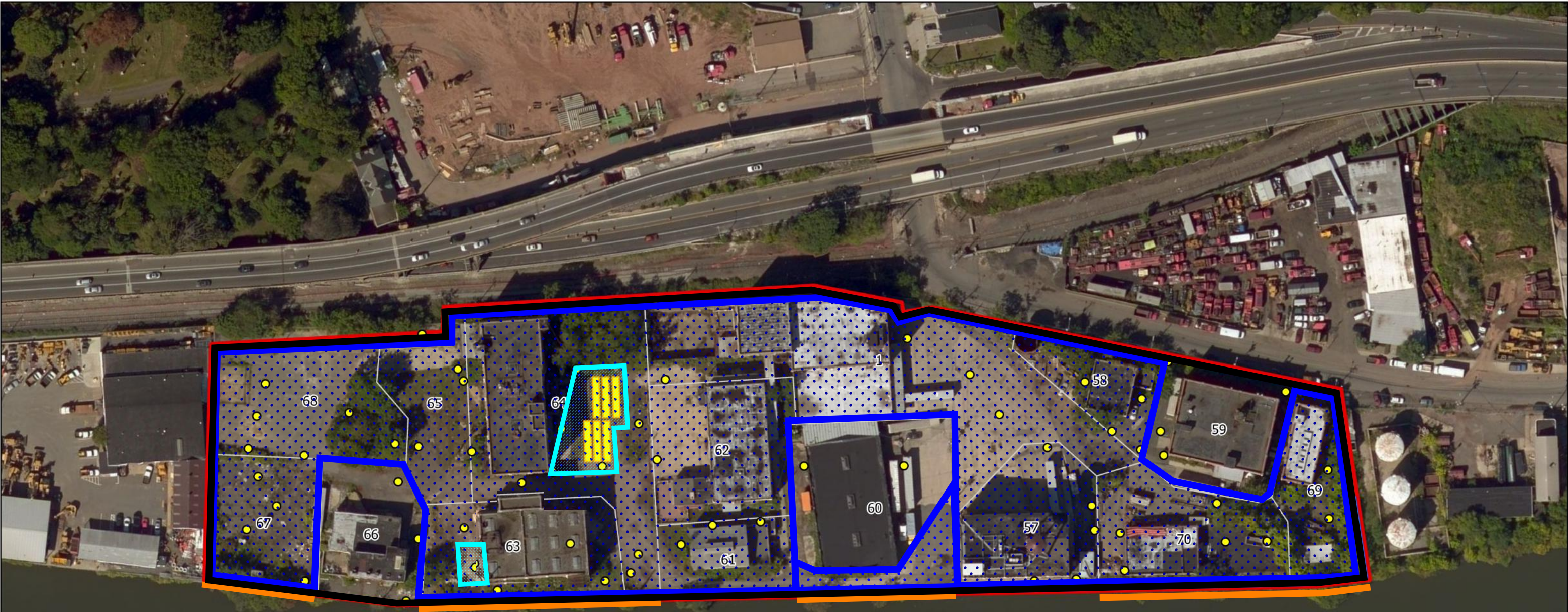


Institutional Controls

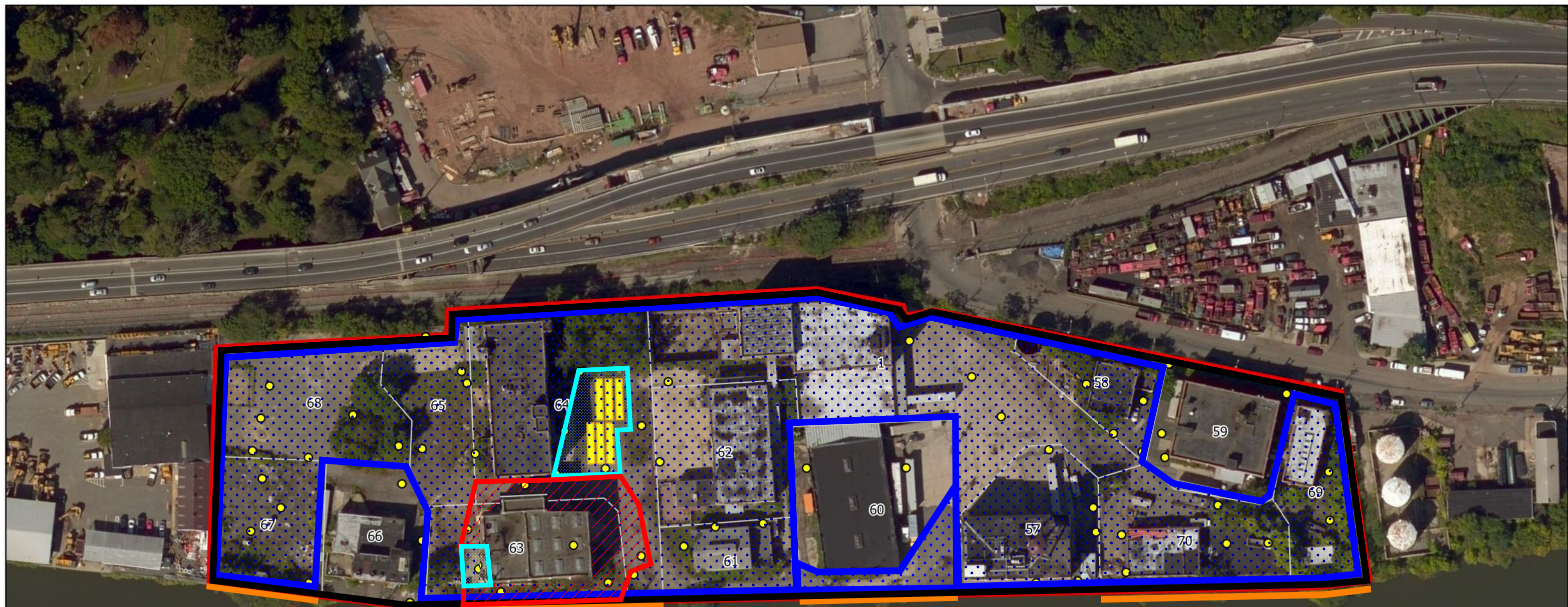
Excavation and Off-Site Disposal to 13'(+)
UST and B-33 to 7' (and copper to 2')






<div>JOB NO.: 0013620</div> <div>DATE: May, 2020</div> <div>1 inch = 100 feet</div> <div>SHEET: OF</div>	<div>RIVERSIDE INDUSTRIAL PARK SUPERFUND SITE</div>	<div>SOIL ALTERNATIVE 2 - INSTITUTIONAL CONTROLS AND LNAPL REMOVAL</div>	<div>Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, © 2020 Microsoft Corporation © 2020</div>	<div> 0 25 50 100 Feet</div>	<div><div>300 Penn Center Blvd. Suite 800 Pittsburgh, Pennsylvania 15235 www.woodardcurran.com</div></div>
<div>FIGURE 5-1</div>	<div>Newark, New Jersey</div>		<div>Spatial Reference Name: NAD 1983 StatePlane New Jersey FIPS 2900 Feet</div>		






- Institutional Controls
- Excavation and Off-Site Disposal to 13'(+) UST and B-33 to 7' (and copper to 2')
- Engineering Controls - Cap (Existing building's concrete ground floor is part of cap).
- Bulkhead Wall

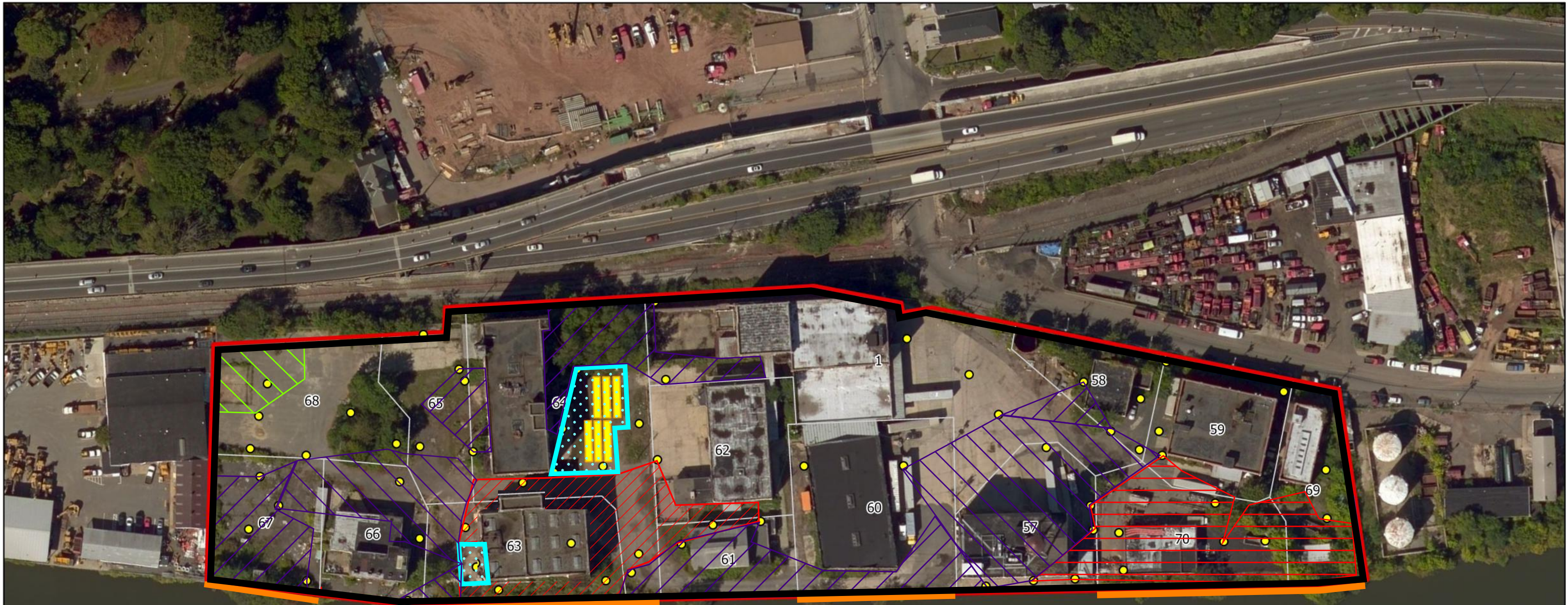
Note: Building demolition is not required or incorporated in this alternative.



 Institutional Controls
 Excavation and Off-Site Disposal to 13'(+)
UST and B-33 to 7' (and copper to 2')
 Excavation and Off-Site Disposal to 6' - Lead, Arsenic, and Benzene
 Engineering Controls - Cap (Existing building's concrete ground floor is part of cap).
 Bulkhead Wall

Note: Building demolition is not required or incorporated in this alternative.

JOB NO.: 0013620	RIVERSIDE INDUSTRIAL PARK SUPERFUND SITE	SOIL ALTERNATIVE 4 - INSTITUTIONAL CONTROLS, ENGINEERING CONTROLS, FOCUSED REMOVAL WITH OFF-SITE DISPOSAL OF LEAD, AND LNAPL REMOVAL	Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, © 2020 Microsoft Corporation © 2020		
DATE: May, 2020					
1 inch = 100 feet					
SHEET: OF					
FIGURE 5-3	Newark, New Jersey		Spatial Reference Name: NAD 1983 StatePlane New Jersey FIPS 2900 Feet		300 Penn Center Blvd Suite 800 Pittsburgh, Pennsylvania 15235 www.woodardcurran.com
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— Institutional Controls

▨ In-Situ Treatment to 2' - B(a)P

▨ In-Situ Treatment to 10' - B(a)P

▨ In-Situ Treatment to 10' (and Post-Treatment Capping) - Lead and PCB 1260

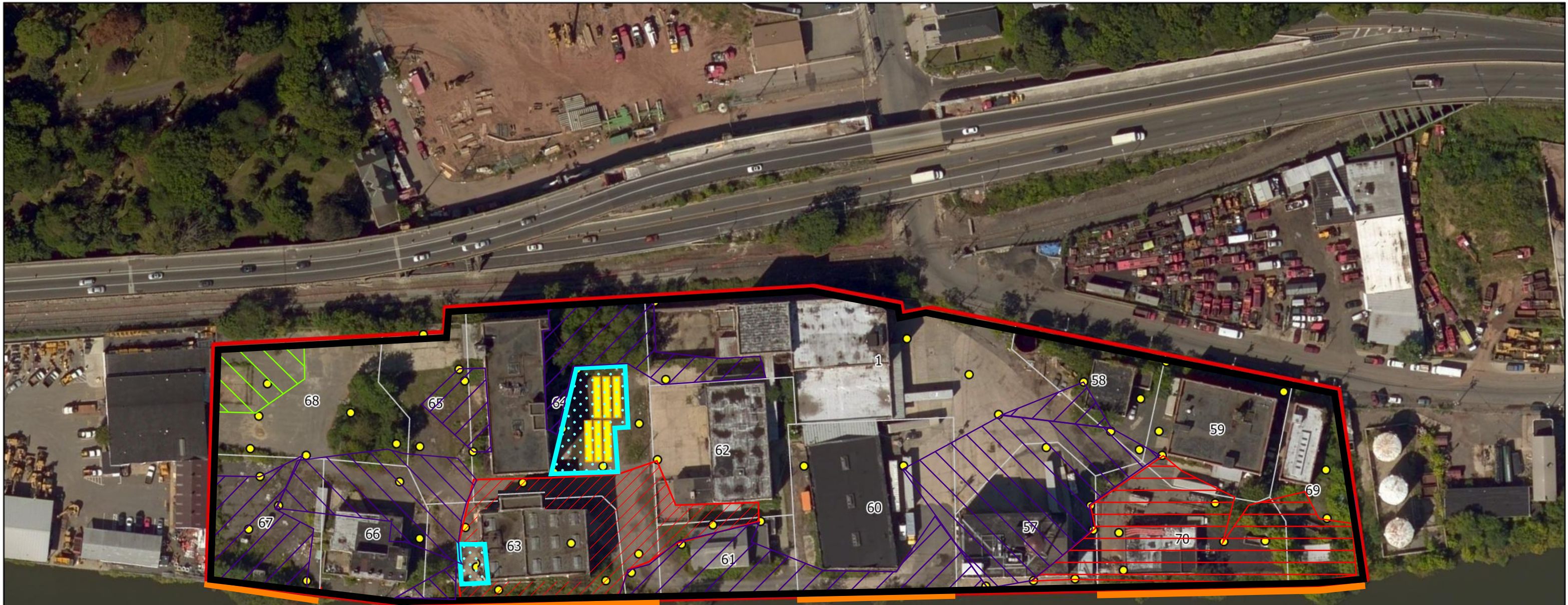
▨ In-Situ Treatment to 11' (and Post-Treatment Capping) - Lead, Arsenic, and Benzene

▨ Excavation and Off-Site Disposal to 13'(+)
UST and B-33 to 7' (and copper to 2')

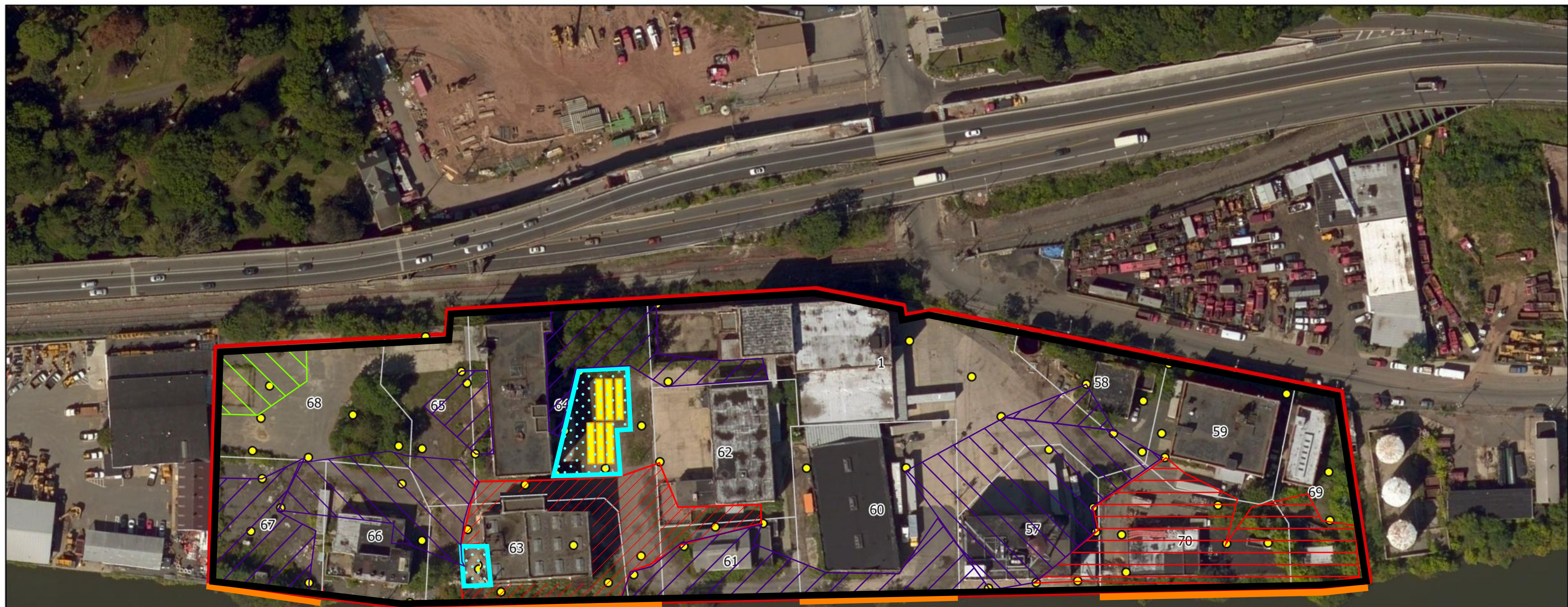
▨ Excavation and Off-Site Disposal to 2' - Copper


— Bulkhead Wall

Note: Portions of Lots 67 and 69 not treated will be capped.



- Institutional Controls
- ▨ Excavation and Off-Site Disposal to 2' - B(a)P
- ▨ Excavation and Off-Site Disposal to 10' - B(a)P
- ▨ Excavation and Off-Site Disposal to 10' - Lead and PCB 1260
- ▨ Excavation and Off-Site Disposal to 11' - Lead, Arsenic, and Benzene
- ▨ Excavation and Off-Site Disposal to 13'(+)
UST and B-33 to 7' (and copper to 2')
- ▨ Excavation and Off-Site Disposal to 2' - Copper
- Bulkhead Wall



-  Institutional Controls
 Excavation, Ex-Situ Treatment and On-Site Placement to 2' - B(a)P
 Excavation, Ex-Situ Treatment and On-Site Placement to 10' - B(a)P
 Excavation, Ex-Situ Treatment and On-Site Placement to 10' - Lead and PCB 1260
 Excavation, Ex-Situ Treatment and On-Site Placement to 11' - Lead, Arsenic, and Benzene
 Excavation and Off-Site Disposal to 13'(+), UST and B-33 to 7' (and copper to 2')
 Excavation, Ex-Situ Treatment and On-Site Placement to 2' - Copper
 Bulkhead Wall

JOB NO.:	0013620
DATE:	May, 2020
1 inch =	100 feet
SHEET:	OF

FIGURE 5-6

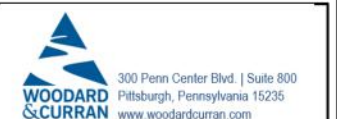
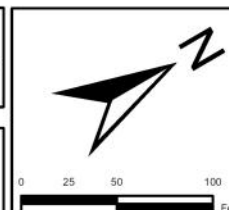
RIVERSIDE INDUSTRIAL PARK
SUPERFUND SITE

Newark, New Jersey

SOIL ALTERNATIVE 7 - INSTITUTIONAL CONTROLS, EX SITU TREATMENT AND ON-SITE PLACEMENT, ENGINEERING CONTROLS, AND LNAPL REMOVAL

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JOB NO.: 0013620
DATE: June, 2020
1 inch = 100 feet
SHEET: OF

FIGURE 5-7

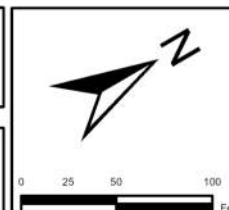
RIVERSIDE INDUSTRIAL PARK
SUPERFUND SITE

Newark, New Jersey

Groundwater Alternative 2: Institutional Controls, Site Containment at River Edge and Monitored Natural Attenuation

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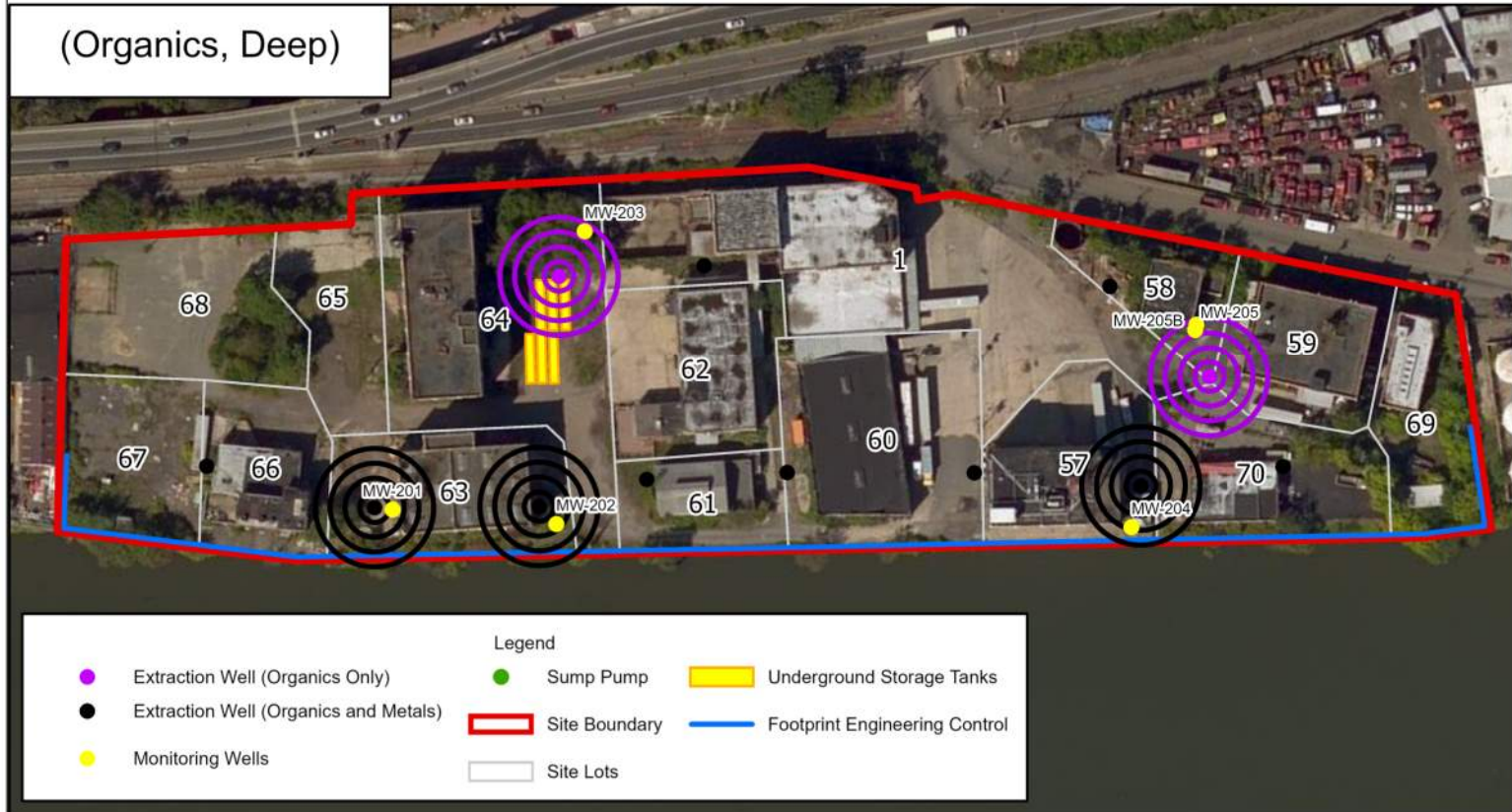
(Organics, Shallow)



(Metals, Shallow)



(Organics, Deep)



(Metals, Deep)



Legend

●

Extraction Well (Organics Only)

●

Extraction Well (Organics and Metals)

●

Monitoring Wells

●

Sump Pump

■

Site Boundary

■

Site Lots

■

Underground Storage Tanks

■

Footprint Engineering Control

JOB NO.: 0013620

DATE: June, 2020

1 inch = 160 feet

SHEET: OF

RIVERSIDE INDUSTRIAL PARK
SUPERFUND SITE

Newark, New Jersey

Groundwater Alternative 3: Institutional Controls, Site Containment at
River Edge, and Pump and Treat

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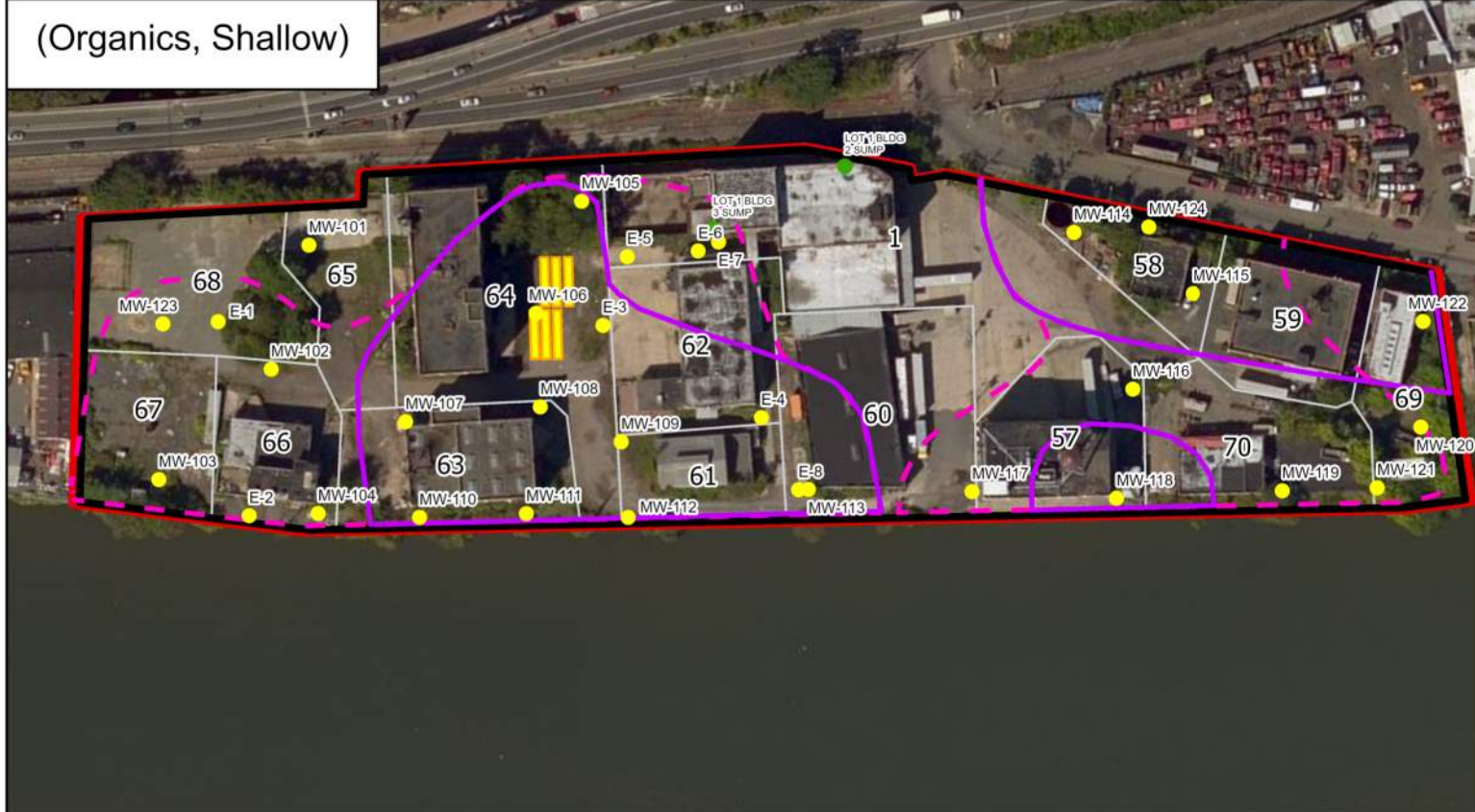
Spatial Reference
Name: NAD 1983 StatePlane New Jersey
FIPS 2900 Feet

0 40 80 160
Feet

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(Organics, Shallow)



(Metals, Shallow)



(Organics, Deep)



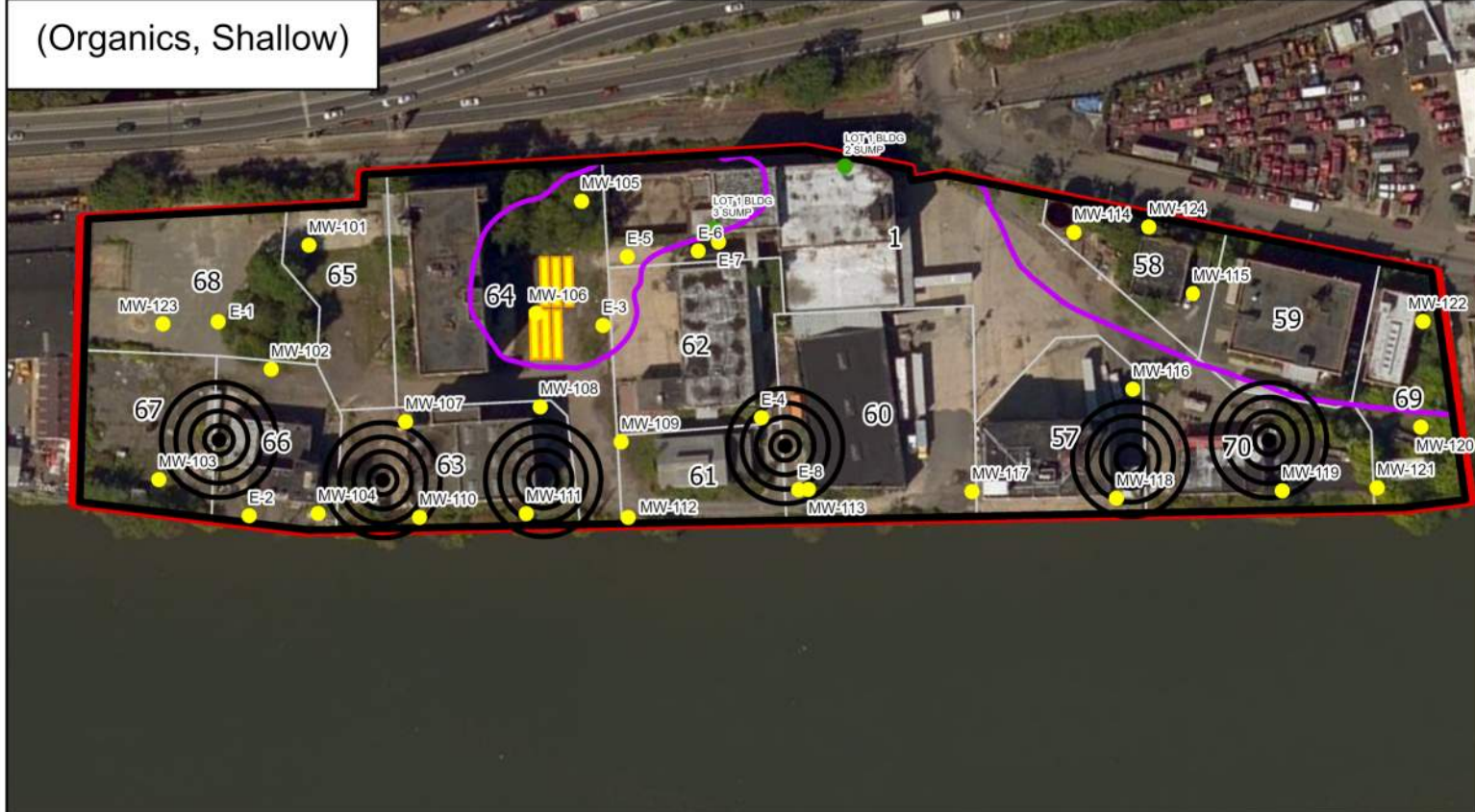
(Metals, Deep)



Legend

● Monitoring Wells	■ Underground Storage Tanks	— Metals In-Situ Treatment Area (Includes all ARAR Exceedances)
● Sump Pump	■ Footprint of Groundwater Alternative 4	— SVOCs In-Situ Treatment Area
■ Site Boundary	— Alternate Metals In-Situ Treatment Area (Includes Pb, Se; Excludes As)	— VOCs In-Situ Treatment Area
□ Site Lots		

(Organics, Shallow)



(Metals, Shallow)



(Organics, Deep)



(Metals, Deep)



Extraction Well (Organics Only)

Extraction Well (Organics and Metals)

Monitoring Wells

Sump Pump

Site Boundary

Site Lots

Underground Storage Tanks

Organic In-Situ Treatment

Metal In Situ Treatment

Footprint of Groundwater Alternative 5

Legend

JOB NO.: 0013620

DATE: June, 2020

1 inch = 160 feet

SHEET: OF

RIVERSIDE INDUSTRIAL PARK
SUPERFUND SITE

Newark, New Jersey

Groundwater Alternative 5:
Institutional Controls, In-Situ Remediation, and
Targeted Pump and Treat

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0 40 80 160
Feet

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FIGURE 5-10





Legend

- Underground Storage Tanks
- Site Boundary
- Site Lots
- Footprint of Engineer Control (Site Containment)
- Footprint of Groundwater Alternative 7

JOB NO.: 0013620
 DATE: June, 2020
 1 inch = 100 feet
 SHEET: OF

FIGURE 5-12

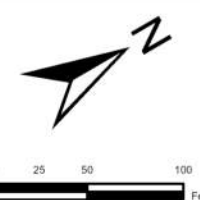
RIVERSIDE INDUSTRIAL PARK
 SUPERFUND SITE

Newark, New Jersey

Groundwater Alternative 7: Institutional Controls and Site Containment

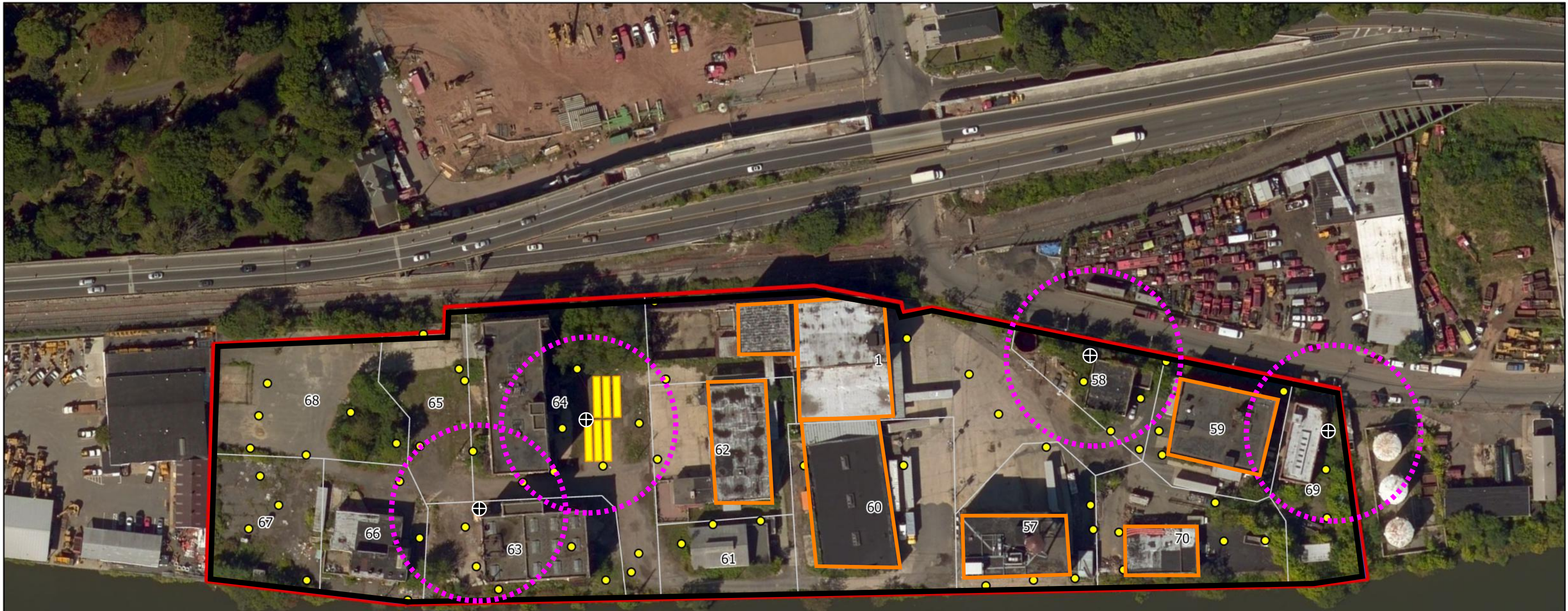
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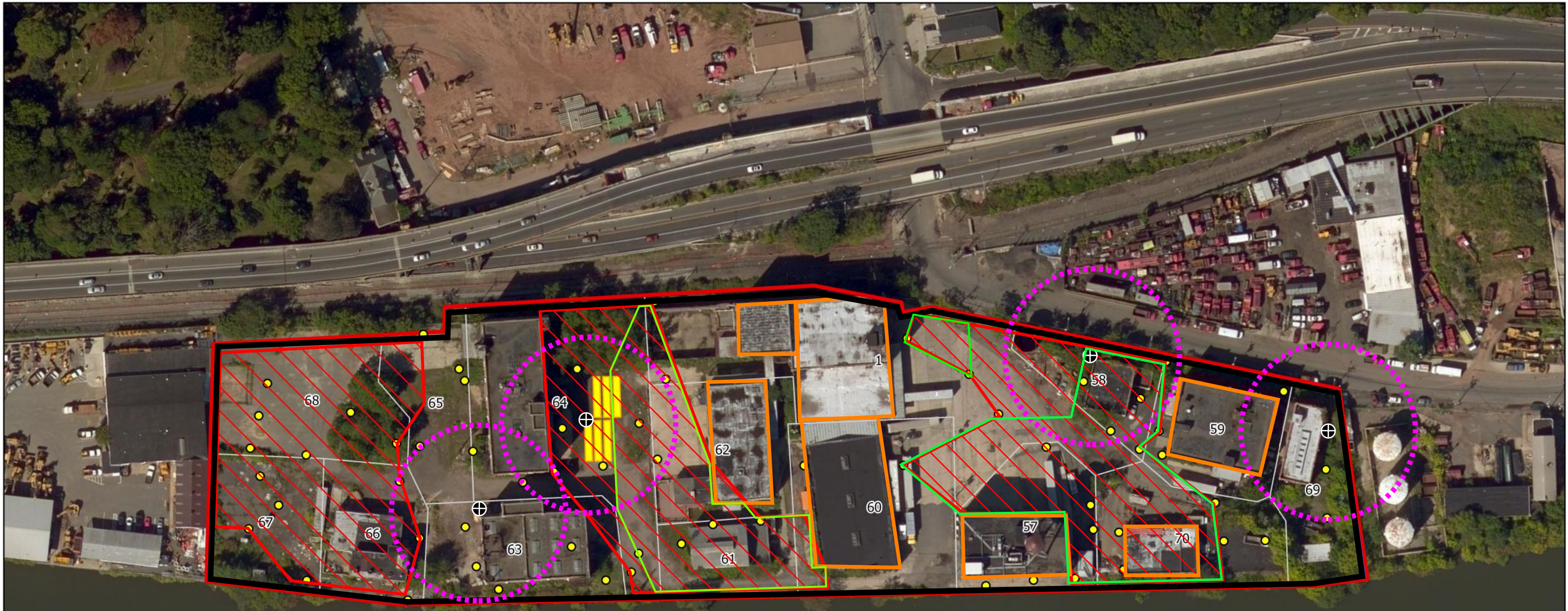
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— Institutional Controls

— Air Monitoring or Engineering Controls (existing occupied buildings)

⊕ Shallow Groundwater VISL Exceedance. Existing or future buildings within 100-foot radius from monitoring well will warrant further investigation for potential vapor intrusion or institutional controls. Areas are based on current data. Boundary would be delineated from the edge of the plume, per NJDEP guidance.



- Institutional Controls
- Site-Wide Engineering Controls (future buildings)
- Air Monitoring or Engineering Controls
- In-Situ Remediation



Shallow Groundwater VISL Exceedance. Existing or future buildings within 100-foot radius from monitoring well will warrant further investigation for potential vapor intrusion or institutional controls. Areas are based on current data. Boundary would be delineated from the edge of the plume, per NJDEP guidance.

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 1 inch = 100 feet
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FIGURE 5-14

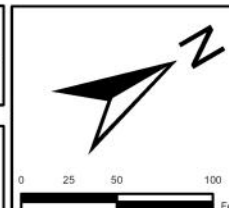
RIVERSIDE INDUSTRIAL PARK
 SUPERFUND SITE

Newark, New Jersey

SOIL GAS ALTERNATIVE 3 - INSTITUTIONAL CONTROLS,
 SITE-WIDE ENGINEERING CONTROLS (FUTURE
 BUILDINGS), AND AIR MONITORING OR ENGINEERING
 CONTROLS AND IN-SITU REMEDIATION OF SOIL/FILL
 (EXISTING OCCUPIED BUILDINGS)

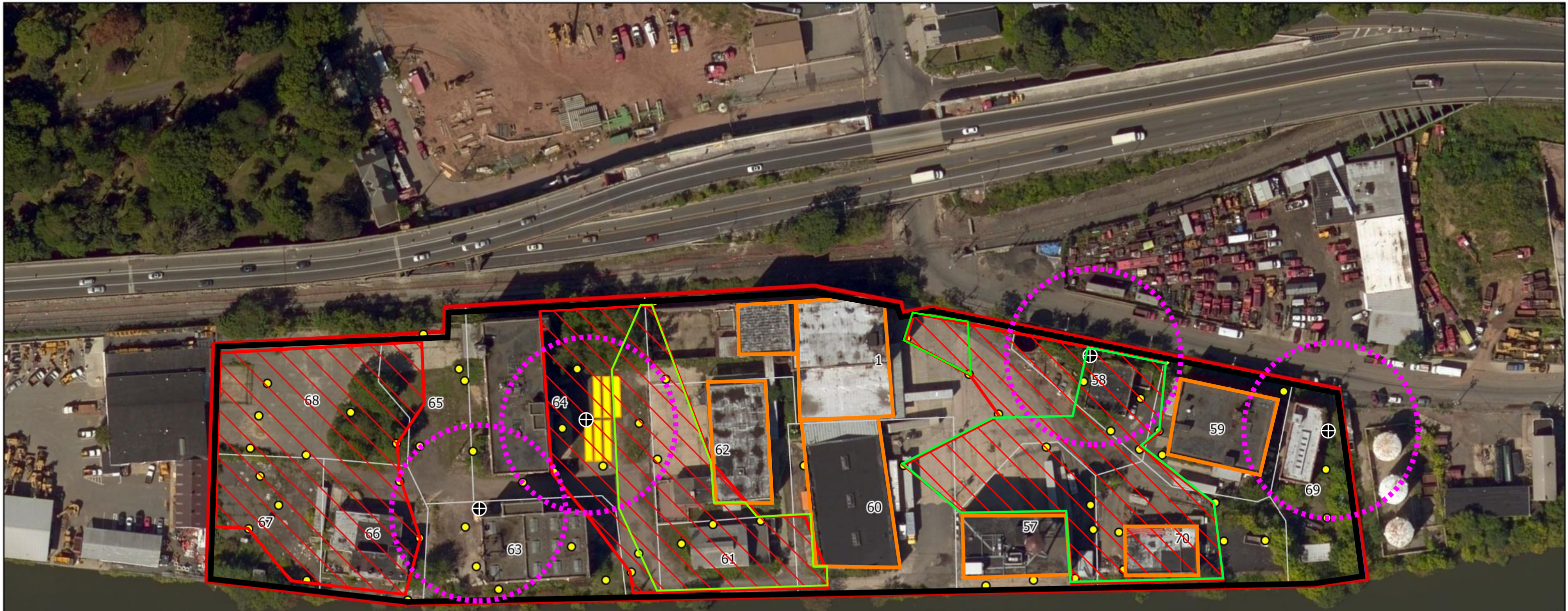
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- Institutional Controls
- ▨ Site-Wide Engineering Controls (future buildings)
- ▭ Air Monitoring or Engineering Controls
- ▭ Removal and Off-Site Disposal (existing occupied buildings)
- ⊕ Shallow Groundwater VISL Exceedance. Existing or future buildings within 100-foot radius from monitoring well will warrant further investigation for potential vapor intrusion or institutional controls. Areas are based on current data. Boundary would be delineated from the edge of the plume, per NJDEP guidance.

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FIGURE 5-15

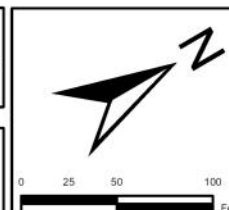
RIVERSIDE INDUSTRIAL PARK
SUPERFUND SITE

Newark, New Jersey

SOIL GAS ALTERNATIVE 4 - INSTITUTIONAL CONTROLS,
SITE-WIDE ENGINEERING CONTROLS (FUTURE
BUILDINGS), AND AIR MONITORING OR ENGINEERING
CONTROLS AND REMOVAL AND OFF-SITE DISPOSAL OF
SOIL/FILL (EXISTING OCCUPIED BUILDINGS)

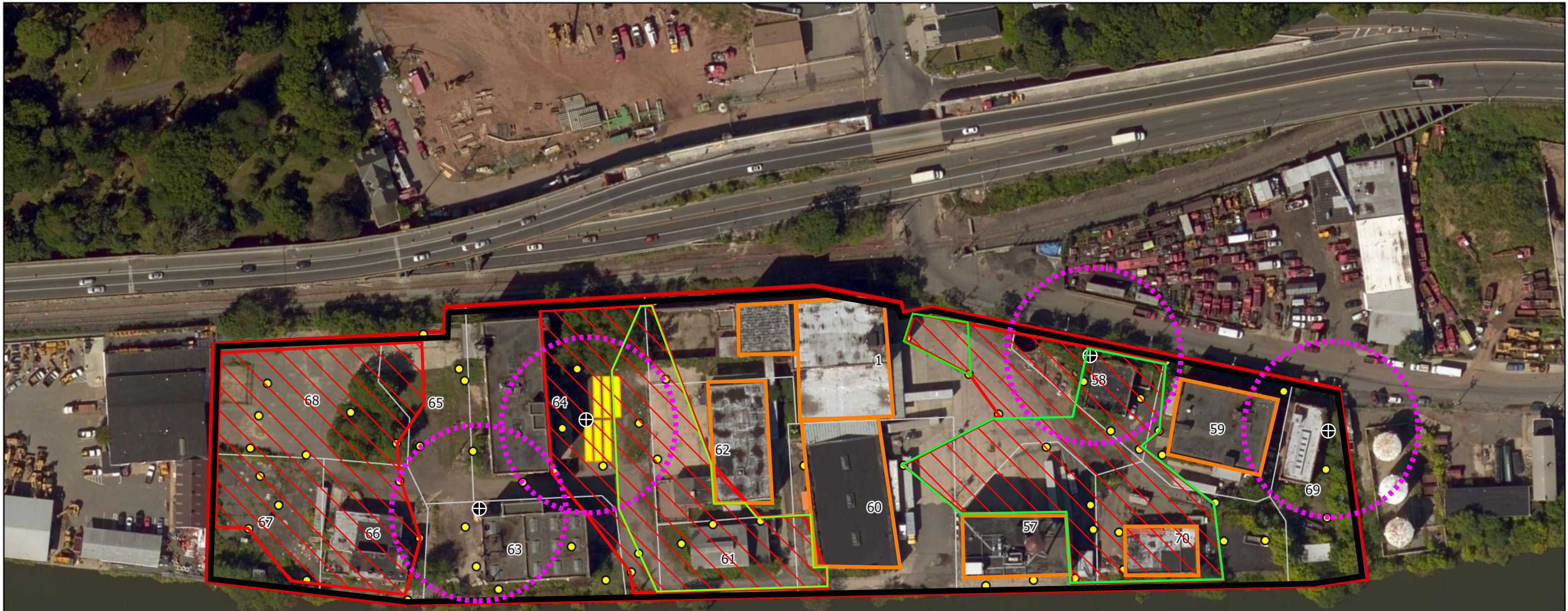
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- Institutional Controls
- Site-Wide Engineering Controls (future buildings)
- Air Monitoring or Engineering Controls
- Ex-Situ Treatment and On-Site Placement (existing occupied buildings)



Shallow Groundwater VISL Exceedance. Existing or future buildings within 100-foot radius from monitoring well will warrant further investigation for potential vapor intrusion or institutional controls. Areas are based on current data. Boundary would be delineated from the edge of the plume, per NJDEP guidance.

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1 inch = 100 feet
SHEET: OF

FIGURE 5-16

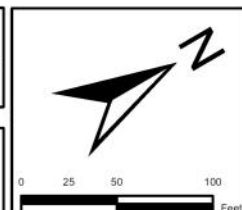
RIVERSIDE INDUSTRIAL PARK
SUPERFUND SITE

Newark, New Jersey

SOIL GAS ALTERNATIVE 5 - INSTITUTIONAL CONTROLS,
SITE-WIDE ENGINEERING CONTROLS (FUTURE BUILDINGS),
AND AIR MONITORING OR ENGINEERING CONTROLS AND
EX-SITU TREATMENT AND ON-SITE PLACEMENT OF
SOIL/FILL(EXISTING OCCUPIED BUILDINGS)

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